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WASHINGTON, DC 200373202

EXAMINER
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DOROSHENK, ALEXA A

ART UNIT	PAPER NUMBER
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1764

22

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Please find below and/or attached an Office communication concerning this application or proceeding.



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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 22

Application Number: 09/231,791  
Filing Date: January 15, 1999  
Appellant(s): GUARINO ET AL.

\_\_\_\_\_  
Neil B. Siegel  
For Appellant

EXAMINER'S ANSWER

MAILED  
APR 4 2003  
GROUP 1700

This is in response to the appeal brief filed January 21, 2003.

**(1) Real Party in Interest**

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

Appellant's brief includes a statement that claims 1-10 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 4-6, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Poussin (5,202,097).

With regard to claim 1, Poussin discloses construction of an assembly having an unperforated cylindrical wall (Figure 1 (10)) coaxial to the gas outlet wall (Figure 1 (9)) in the catalytic bed (31), the unperforated cylindrical wall (10) extending from an upper end of the gas outlet wall along a perforated portion of the outlet wall of a prefixed length in the catalytic bed (col. 7, lines 19-21: the unperforated cylindrical wall is immersed in the catalyst bed).

Poussin discloses a free-space between the gas outlet wall (9) and the unperforated wall (10).

Poussin discloses providing means for closing an upper end of the free-space between the unperforated wall (10) and the gas outlet wall (9), in proximity of the upper end of the gas outlet wall, thereby preventing a bypass of the catalytic bed or a recycling to the catalytic bed of the gas entering and leaving the reactor.

With regard to claim 4, Poussin discloses the unperforated wall supported by the gas outlet wall (Figure 1).

With regard to claim 5, Poussin discloses a gas outlet wall having a diameter smaller than the diameter of the gas inlet wall and of the unperforated wall (Figure 1). Poussin further discloses the unperforated wall supported by a gas-tight horizontal

baffle (Figure 1) which protrudes above the upper end of the gas outlet wall and rests on the gas outlet wall.

With regard to claim 6, Poussin discloses a synthesis reactor comprising an external shell (Figure 1 (33)) a catalytic bed (Figure 1 (31)) provided with a perforated inlet wall (Figure 1 (7)) and a perforated outlet wall (Figure 1 (9)) in the shell.

Poussin discloses an apparatus having an unperforated cylindrical wall (Figure 1 (10)) coaxial to the gas outlet wall (9) in the catalytic bed (31), the unperforated cylindrical wall (10) extending from an upper end of the gas outlet wall along a perforated portion of the outlet wall of a prefixed length in the catalytic bed (col. 7, lines 19-21: the unperforated cylindrical wall is immersed in the catalyst bed).

Poussin discloses defining a free-space between the gas outlet wall (9) and the unperforated wall (10).

Poussin discloses providing means for closing the free-space between the unperforated wall (10) and the gas outlet wall (9), in proximity of the upper end of the gas outlet wall, preventing a bypass of the catalytic bed or a recycling to the catalytic bed of the gas entering and leaving the reactor.

With regard to claim 9, Poussin discloses the unperforated wall supported by the gas outlet wall. Poussin Figure 1.

With regard to claim 10, Poussin discloses a gas outlet wall having a diameter smaller than the diameter of the gas inlet wall and of the unperforated wall. Poussin Figure 1. Poussin further discloses the unperforated wall supported by a gas-tight

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horizontal baffle (Figure 1) which protrudes above the upper end of the gas outlet wall and rests on the gas outlet wall.

Claims 2, 3, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poussin (5,202,097) as applied to claims 1, 4-6, 9 and 10 above.

With regard to claims 2 and 7, Poussin discloses essentially the same invention as the instant claim but fails expressly to disclose that the unperforated wall extends for a portion comprising between 5% and 50% of the length of the gas outlet wall.

At the time of the invention it would have been obvious to one skilled in the art to extend the unperforated wall for a distance comprising between 5% and 50% of the length of the gas outlet wall. The motivation would have arisen as a design choice.

The length of the unperforated wall can also be considered a result-effective variable. The wall could be extended while monitoring the extent of undesired bypassing of the catalyst by the process stream. When the bypassing has dropped to an acceptable level, the wall is long enough.

With regard to claims 3 and 8, Poussin discloses essentially the same invention as the instant claim but fails expressly to disclose that the free space has a thickness of between 0.5 and 10 cm.

At the time of the invention it would have been obvious to one skilled in the art to construct the free space with a thickness of between 0.5 and 10 cm. The motivation would have arisen as a design choice.

The thickness can also be considered a result-effective variable. The thickness could be extended while monitoring the performance of the system. When the performance reaches an acceptable level, the thickness can be considered adequate.

**(11) *Response to Argument***

Appellant argues that the cylindrical wall 10 of Poussin does not extend along a perforated portion of the gas outlet wall 9 because the upper and lower ends of the gas outlet wall 9 are not provided with perforations in figure 1 and that the upper portion of wall 9 does not need perforations.

The examiner respectfully disagrees with Appellant. The tube is described in the specification as "a generally perforated tube" (col. 7, lines 16-17). The examiner also notes that the figures are schematic only and not pictorial, therefore the perforations illustrated in figure 1 do not demonstrate the sole locations of perforations in the tube. This is also demonstrated by the additional perforations illustrated in figures 2 and 8.

Appellant argues that the spacing between cylindrical wall of cap 10 and tube 9 "in all probability does not exist in an actual reactor".

The examiner respectfully disagrees with appellant. Figure 1 of Poussin clearly illustrates of a space between cap 10 and tube 9 and therefore discloses this limitation of the instant claims, despite the probability of one providing such a space when constructing an actual reactor.

Appellant argues that the cylindrical wall of the cap 10 does not extend into a bed of catalytic material, as shown in figure 1.

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The examiner respectfully disagrees with appellant. Poussin specifically states that the cap 10 is "immersed in the catalyst bed" (col. 7, lines 19-21). Appellant seems to have disregarded this statement by Poussin as appellant relies solely on figure 1 for appellant's argument. Even if one were to rely solely on figure 1, the examiner notes that in addition to catalyst bed 31, catalyst material 13 is located above material layer 19 (col. 7, lines 23-30) in which the cylindrical wall of the cap 10 extends.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

*RAP*  
AAD

April 1, 2003

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